

REMARKS

The courtesy of Examiner Pokrzywa to grant applicant's attorney a telephone interview on November 6, 2001 is noted with appreciation. The following amendments and comments are consistent with those discussed during the telephone interview.

a. Application Summary

The status of the claims at the time of the Office Action dated April 10, 2001 is as follows:

Claims 4-6, 13-16 and 23-35 are pending in the present Application;

Claims 4, 6, 13, 14, 27-30 and 35 presently stand rejected under Section 102(b) as being anticipated by Ishiguro et al., U.S. Patent No. Re. 34,460 (hereafter "Ishiguro");

Claims 31, 33 and 35 presently stand rejected under Section 102(b) as being anticipated by Shinada et al, U.S. Patent No. 5,008,709 (hereafter "Shinada");

Claim 5 presently stands rejected under Section 103(a) as being obvious over Ishiguro in view of Oshita, U.S. Patent No. 5,343,306 (hereafter "Oshita");

Claims 15 and 16 presently stand rejected under Section 103(a) as being obvious over Ishiguro in view of Matsuo et al., U.S. Patent No. 4,912,518 (hereafter "Matsuo");

Claims 23 and 24 presently stand rejected under Section 103(a) as being obvious over Collard et al., U.S. Patent No. 5,825,988 (hereafter "Collard") in view of Ishiguro;

Claims 25 and 26 presently stand rejected under Section 103(a) as being obvious over Collard in view of Ishiguro further in view of Matsuo et al., U.S. Patent No. 4,912,518 (hereafter "Matsuo"); and

Claims 32 and 34 presently stand rejected under Section 103(a) as being obvious over Shinada in view of Yoshida et al., U.S. Patent No. 5,930,006 (hereafter "Yoshida").

By this Amendment, each of claims 4-6, 13-16, 23-26, 28, 29, and 31-35 have been amended to change "image data" to --pixel density data-- so as to make clear that the "data" is that of the imagery on the page.

b. Section 102 Rejections

i. Rejection of Claims 4, 6, 13, 14, 27-30 and 35 over Ishiguro

The rejection of Claims 4, 6, 13, 14, 27-30 and 35 under Section 102(b) as being anticipated by Ishiguro et al., U.S. Re. 34,460 (hereafter "Ishiguro") is traversed based on the following.

Claim 4, together with claims 6 and 27 which depend therefrom, will be addressed first. Claim 4 recites in part:

An image processing device operable in a plurality of modes of operation, comprising:
 a memory for storing pixel density data of a plurality of frames;
 a state decision controller for determining, for each frame, a state of a frame of said pixel density data stored in said memory;
 an operation panel for selecting any of said plurality of modes of operation; and
 a selection prohibiting controller for *comparing the state between at least two frames*, as determined by the state decision controller, and for *automatically prohibiting selecting an inoperable mode of operation* of said plurality of modes of operation through said operation panel *based on the result of said comparison.*

[Emphasis added.]

Thus, claim 4 requires first that the apparatus include a memory for storing *pixel density data* of a plurality of frames.

As the present specification makes clear between page 14, line 24 and page 15, line 10, an apparatus in accordance with the present invention scans an original image to generate a pixel output signal depending on the quantity of light received at the sensor (e.g., received at the photoelectric conversion element). As a reader of ordinary skill in the art will understand, the "output signal depending on the quantity of light received" is a direct indication of the color or density of the image at that point on the page. Thus, it is a characteristic of this invention, that the image on the page be scanned and the resultant data used in the inventive process. To describe this imagery data, in contrast to other data

associated with the page, this amendment adopts the descriptive term "pixel density data." That is, pixel density data is data pertaining to the imagery on the page.

Claim 4 further requires that the stored pixel density data be evaluated to determine a state of the frames and the thus determined states be compared to control a result. As the following will explain, Ishiguro fails to disclose these limitations and thus cannot anticipate claim 4.

Ishiguro fails to disclose a memory which stores *pixel density data* of a plurality of frames. Instead, Ishiguro discloses a memory which stores *the size* (S1) of a sheet being copied. (col. 18, lines 64-67). The size of a sheet is not pixel density data. Moreover, the size of a sheet being copied is certainly not *pixel density data* of a *plurality* of frames. Thus, Ishiguro fails to disclose this limitation of claim 4.

Ishiguro also fails to disclose determining a state of the frames of stored pixel density data and comparing the determined states. Instead, Ishiguro determines the size (S1) of a sheet being copied and compares it with a size (Sx) which had been selected at the start of the copy operation. (col. 18, lines 64-67). Thus, Ishiguro does not compare the states of a plurality of frames. Thus, Ishiguro also fails to disclose this limitation of claim 4.

In order to anticipate a claim, a cited reference must disclose each and every limitation of the claim. As Ishiguro fails to disclose (at least) these two limitations of claim 4, Ishiguro cannot anticipate claim 4. For the same reasons, Ishiguro cannot anticipate claims 6 and 27 which depend from claim 4.

Turning now to claim 13, together with claim 14 which depends therefrom. Claim 13 recites:

An image forming apparatus operable in a plurality of print modes,
comprising:
 a memory for storing pixel density data of a plurality of frames;
 a printer for reading said pixel density data stored in said memory

for each frame and for printing;
a state decision controller for determining, for each frame, a state of a frame of said pixel density data stored in said memory;
an operation panel for selecting any of said plurality of print modes;
and
a selection prohibiting controller *for comparing the state between at least two frames*, as determined by the state decision controller, and for automatically prohibiting selection of an inoperable print mode of said plurality of print modes through said operation panel based on the result of said comparison.

[Emphasis added.]

Thus, claim 13, like claim 1, requires that the apparatus include a memory for storing *pixel density data* of a plurality of frames and that the stored data be evaluated to determine a state of the frames and the thus determined states be compared to control a result.

As discussed above, Ishiguro fails to disclose both of these features. Accordingly, as Ishiguro fails to disclose two limitations of claim 13, Ishiguro cannot anticipate this claim. For the same reasons, Ishiguro cannot anticipate claim 14, which depends from claim 13.

Turning now to claim 28, together with claims 29-30, which depend therefrom. Claim 28 recites:

An image processing device operable in a plurality of modes of operation, comprising:
a memory for storing pixel density data of a plurality of frames;
a state decision controller for determining, for each frame, a state of a frame of said pixel density data stored in said memory;
a selection prohibiting controller, responsive to said state decision controller, *for comparing the state between at least two frames*, as determined by the state decision controller, and for determining an inoperable mode of operation of said plurality of modes of operation based on the result of said comparison; and
an operation panel, responsive to said selection prohibiting controller, for selecting any of said plurality of modes of operation, said operation panel automatically prohibiting selecting said thus determined inoperable mode of operation.

[Emphasis added.]

Thus, claim 28, like claims 1 and 13, requires that the apparatus include a memory for storing pixel density data of a plurality of frames and that the stored data be evaluated to determine a state of the frames and the thus determined states be compared to control a result.

As discussed above, Ishiguro fails to disclose both of these features. Accordingly, as Ishiguro fails to disclose two limitations of claim 28, Ishiguro cannot anticipate this claim. For the same reasons, Ishiguro cannot anticipate claims 29-30, which depend from claim 28.

Turning now to claim 35. Claim 35 recites:

An image formation apparatus comprising:
a memory for storing pixel density data corresponding to a plurality of images;
a print portion for forming an image on a sheet from said pixel density data stored in said memory;
a stapler for stapling a plurality of printed sheets; and
a controller which permits said stapler to operate when all of said plurality of printed sheets have images formed thereon from said pixel density data stored in said memory which *are uniform in size* and otherwise prohibiting said stapler from operating.

[Emphasis added.]

Thus, claim 35, similar to claims 1, 13 and 28, requires that the apparatus include a memory for storing pixel density data of a plurality of frames and that the stored data be evaluated to determine a size of the images and the thus determined sizes be compared to control a result (stapling).

As discussed above, Ishiguro fails to disclose both of these features. Specifically, Ishiguro fails to disclose a memory for storing pixel density data of a plurality of frames and Ishiguro fails to disclose comparing the size of one stored frame of pixel density data

with the size of another stored frame of pixel density data. Accordingly, as Ishiguro fails to disclose two limitations of claim 35, Ishiguro cannot anticipate this claim.

Accordingly, in view of the above, it is requested that the rejection of Claims 4, 6, 13, 14, 27-30 and 35 under Section 102(b) as being anticipated by Ishiguro be reconsidered and withdrawn.

ii. Rejection of Claims 31, 33 and 35 over Shinada

The rejection of Claims 31, 33 and 35 under Section 102(b) as being anticipated by Shinada et al., U.S. Patent No. 5,008,709 (hereafter "Shinada") is traversed based on the following.

Claim 31 recites:

An image formation apparatus comprising:
a sensor for reading an image on an original;
a memory for storing pixel density data read by said sensor;
means for editing pixel density data from said pixel density data
stored in said memory;
an image forming portion for using edited pixel density data to print
an image;
a feeder capable of feeding originals having different sizes to an
image reading position;
means for reading mixed originals for reading a plurality of
originals collectively set in said feeder;
***means for determining a size of an image corresponding to said
pixel density data of each image stored in said memory; and***
means for controlling, responsive to said means for determining,
which permits said means for editing to edit an image ***when all images
corresponding to said plurality of originals are uniform in size*** and
otherwise prohibiting said means for editing from editing an image.

[Emphasis added.]

Thus, claim 31 requires that the size of each of a plurality of originals ***be determined from pixel density data stored in memory*** and the thus determined sizes be compared. Then, when all images corresponding to the plurality of originals are uniform

in size, editing is permitted. Otherwise, when all images corresponding to the plurality of originals are NOT uniform in size, editing is NOT permitted.

As will be explained in the following, Shinada fails to disclose this aspect of Claim 31 and is thus unable to anticipate Claim 31.

Shinada discloses a copy machine which is capable of recycling documents of various sizes during processing. Thus, for instance, in order to reproduce documents which have different original sizes onto pages of the same size, the copy machine copies each page at different magnification. The machine copies at different magnification in an efficient manner because the original documents are copied in a sequence based on their order. In other words, all of the documents having a first size are copied first at a first magnification, then all documents having a second size are copied second at a second magnification. With each copy cycle, documents not to be copied in that cycle are recirculated.

Shinada determines the size of the document by directly measuring the size of the sheet. Shinada does not collect pixel density data for the page and then from that derive the size of the image. Thus, Shinada does not disclose or suggest this limitation of claim 31 and cannot anticipate this claim.

As described above, Shinada discloses varying the magnification setting based on the original document size and further discloses copying originals in an ordered sequence based on their size. Thus, Shinada also does not disclose comparing the sizes of all of the original documents and based on a result of that comparison, permitting an editing function on an image when all images are uniform in size and otherwise not permit editing as required by claim 31.

As Shinada fails to disclose the above limitation of claim 31, Shinada cannot anticipate this claim.

The discussion will now turn to Claim 33, which recites:

An image formation apparatus comprising:
a sensor for reading an image on an original;
a memory for storing pixel density data read by said sensor;
an image forming portion for using edited pixel density data stored
in said memory to print an image;
a stapler for stapling a plurality of sheets each bearing a formed
image thereon;
a feeder capable of feeding originals having different sizes to an
image reading position;
*means for reading mixed originals for reading a plurality of
originals collectively set in said feeder;*
*means for determining a size of an image corresponding to said
pixel density data of each image stored in said memory;* and
means for controlling, responsive to said means for determining,
*which permits said stapler to operate when all images corresponding to
said plurality of originals are uniform in size and otherwise prohibiting
said stapler from operating.*

[Emphasis added.]

Thus, claim 33, similar to claim 31, requires that the size of each of a plurality of originals be determined from the pixel density data the thus determined sizes be compared. When all images corresponding to the plurality of originals are uniform in size, permit stapling. Otherwise, when all images corresponding to the plurality of originals are NOT uniform in size, NOT permit stapling.

As will be explained in the following, Shinada fails to disclose this aspect of Claim 33 and is thus unable to anticipate Claim 33.

As noted above, Shinada discloses a copy machine which is capable of recycling documents of various sizes during processing. In the copy machine of Shinada, when original documents have different sizes, these documents can be copied at different magnification settings so that all of the duplicates thereof will have identical sizes.

The present office action states that "the stapler is prohibited from operating on documents which are not uniform in size with the selected size, until all of the documents are copied in one uniform size." (Office Action, page 9.) The cited portion of Shinada to which the office action is referring describes how different size originals are duplicated

with varying magnification so as to form a set of copies where each page is the same size. When the set of copies is completed, it is stapled. As the following will explain, the conclusion drawn in the office action does not follow from the teachings of Shinada.

When the office action states "the stapler is prohibited from operating on documents . . . until all of the documents are copied in one uniform size" Shinada teaches that the duplicates are not stapled until the copying operation is finished. This, of course, is necessary because it is not possible to staple the set of copies before the copies are made. When the office action states that "the stapler is prohibited from operating on documents which are not uniform in size . . ." the office action mischaracterizes Shinada. In the cited passages of Shinada which are referenced in the rejection (col. 40, lines 30-68), the only documents which are not the same size are the *original* documents not the copies. The copies are the same size. The stapler does not staple originals, only copies. Shinada is silent as to prohibiting stapling of copies in the situation where the size of the copies is not uniform. Thus, the stapling operation of Shinada is not controlled based on document size, but is simply performed after the duplicates have been made.

Because Shinada fails to disclose the above limitation of claim 33, Shinada cannot anticipate claim 33.

The discussion will now turn to Claim 35, which recites:

An image formation apparatus comprising:
a memory for storing pixel density data corresponding to a plurality of images;
a print portion for forming an image on a sheet from said pixel density data stored in said memory;
a stapler for stapling a plurality of printed sheets; and
a controller which permits said stapler to operate when all of said plurality of printed sheets have images formed thereon from said pixel density data stored in said memory which are uniform in size and otherwise prohibiting said stapler from operating.

[Emphasis added.]

Thus, claim 35, like claim 33, requires that the size of each of a plurality of originals be determined from pixel density data and the thus determined sizes be compared. When all images corresponding to the plurality of originals are uniform in size, permit stapling. Otherwise, when all images corresponding to the plurality of originals are NOT uniform in size, NOT permit stapling.

As discussed above, the stapling operation of Shinada is not controlled based on document size, but is simply performed after the duplicates have been made. Because Shinada fails to disclose the above limitation of claim 35, Shinada cannot anticipate claim 35.

Accordingly, in view of the above, it is requested that the rejection of Claims 31, 33 and 35 under Section 102(b) as being anticipated by Shinada be reconsidered and withdrawn.

d. Section 103 Rejections

i. Rejection of Claim 5 over Ishiguro and Oshita

The rejection of Claim 5 under Section 103(a) as being obvious over Ishiguro in view of Oshita, U.S. Patent No. 5,343,306 (hereafter "Oshita") is traversed based on the following.

Claim 5 depends from claim 4. As noted above, Ishiguro is unable to anticipate claim 4. Thus, unless Oshita is able to supply the teachings which Ishiguro lacked to anticipate claim 4, Ishiguro and Oshita together will not be able to render obvious either claim 4 or claim 5.

As noted above, claim 4 recites that the state decision controller determines, for each frame, the state of the frame associated with the image data and then a comparison is made between at least two frames so that, as a result of the comparison, an inoperable mode is automatically prohibited.

Oshita, in contrast to the present invention, discloses a facsimile machine which monitors the length of each page of a received document and which:

When the document page is found to be longer than the currently-loaded cut sheet (ST2), the controller 10 inhibits the commencement of the printing of *the particular document page*, and enters the memory reception mode of operation (ST5).

Oshita, col. 5, lines 64-68 [emphasis added].

Thus, Oshita discloses a system which will print each page of a received document until a page to be printed is found to exceed the currently-loaded sheet length. When this occurs, the machine stops printing and stores any subsequently received pages in memory. Thus, Oshita compares each page (as it is about to be printed) to the currently-loaded sheet length.

In contrast to the present invention, Oshita does not make a comparison between the length of a page to the length of another page(s) in the document, much less control a mode of operation which is applicable to the entire multi-page document based on a result of such comparison.

Absent a disclosure of a system which determines the state of two frames of pixel density data, compares the determined states, and prohibits a mode based on the result of the comparison, Oshita cannot cure the deficiency of Ishiguro to render obvious the invention of claim 4.

Thus, as neither Ishiguro nor Oshita, singly or in combination, disclose, suggest or teach a system which determines the state of two frames of pixel density data, compares the determined states, and prohibits a mode based on the result of the comparison, Ishiguro and Oshita cannot render obvious claim 4.

Claims 5 depends from claim 4. As claim 4 is considered to be nonobvious over the cited reference for the above described reasons, claim 5 which depends therefrom is also considered to be nonobvious for at least the same reasons.

Accordingly, in view of the above, it is requested that the rejection of Claim 5 under Section 103(a) as being obvious over Ishiguro in view of Oshita be reconsidered and withdrawn.

ii. Rejection of Claims 15 and 16 over Ishiguro and Matsuo

The rejection of Claims 15 and 16 under Section 103(a) as being obvious over Ishiguro in view of Matsuo et al., U.S. Patent No. 4,912,518 (hereafter "Matsuo") is traversed based on the following.

Claims 15 and 16 depend from claim 13. As noted above, Ishiguro is unable to anticipate claim 13. Thus, unless Matsuo is able to supply the teachings which Ishiguro lacked to anticipate claim 13, Ishiguro and Matsuo together will not be able to render obvious either claim 13, or claims 15 and 16 which depend therefrom.

As noted above, claim 13 requires that the apparatus include a memory for storing *pixel density data* of a plurality of frames and that the stored pixel density data be evaluated to determine a state of the frames and the thus determined states be compared to prevent selection of an inoperative mode.

As discussed above, Ishiguro fails to disclose or suggest both of these features. Accordingly, as Ishiguro fails to disclose two limitations of claim 13, Ishiguro cannot render obvious claim 13.

Matsuo, like Ishiguro, also fails to disclose a memory for storing pixel density data of a plurality of frames. Matsuo also fails to disclose determining the size of each of a plurality of frames from pixel density data stored in memory, and inhibiting selection of an inoperative mode when the sizes of the frames are not uniform.

Instead, Matsuo measures the size of original pages as they are handled by the sheet feeder. That is, in Matsuo, the paper size is measured in contrast to the requirements

of claim 13, which require that the size of pixel density data, which is stored in memory, be measured.

Matsuo also differs from the instant claim because Matsuo does not *prohibit selection* of an inoperative mode when the size of the images is not uniform. Instead, Matsuo states that once the dual feed mode has been selected, the size of the documents is detected and if the documents are not the same size, then the dual feeding process is not performed. (col. 21, lines 57-68). Thus, Matsuo does not prohibit "selection" of the inoperative mode, instead Matsuo allows "selection" of the inoperative mode but does not "perform" the selected inoperative mode.

As the present specification makes clear, it is an objective of the present invention to prevent an inoperative mode from being selected in the first place. Because one application of the present invention is in a so-called digital copy machine where multiple images to be processed can be stored in memory prior to processing, the attributes of these images can be determined before any processing procedures are selected by the user. Because the attributes of the images are known prior to processing, it can be determined which, if any, optional processing steps are not possible. Thus, the operation and configuration of the present invention is utterly different than either Ishiguro or Matsuo.

Because neither Ishiguro nor Matsuo, singly or in combination, disclose, suggest or teach a memory for storing image data of a plurality of frames and the references do not disclose or suggest *prohibiting selection* of an inoperative mode when the size of the originals is not uniform, the references are unable to render claim 13 obvious.

Claims 15 and 16 depend from claim 13. Because, Ishiguro and Matsuo are unable to render obvious claim 13, Ishiguro and Matsuo are also not able to render obvious claims 15 and 16 which depend therefrom.

Accordingly, in view of the above, it is requested that the rejection of Claims 15 and 16 under Section 103(a) as being obvious over Ishiguro in view of Matsuo be reconsidered and withdrawn.

iii. Rejection of Claims 23 and 24 over Collard and Ishiguro

The rejection of Claims 23 and 24 under Section 103(a) as being obvious over Collard et al., U.S. Patent No. 5,825,988 (hereafter "Collard") in view of Ishiguro is traversed based on the following.

Claim 23 is independent and claim 24 depends from claim 23. Claim 23 as presently presented recites:

An image forming apparatus operable in a plurality of print modes, comprising:
a memory for storing a plurality of print jobs, each print job containing image data of at least two frames;
a print-job selector for selecting one of said plurality of print jobs stored in said memory;
a state decision controller for determining, for each frame, a state of a frame of said pixel density data contained in said print job selected by said print-job selector;
a printer for printing said pixel density data contained in said print job selected by said print-job selector;
an operation panel for selecting any of said plurality of print modes;
and
a selection prohibiting controller for comparing the state between at least two frames, as determined by the state decision controller, and for automatically prohibiting selecting an inoperable print mode of said plurality of print modes through said operation panel based on the result of said comparison.

[Emphasis added.]

The present office action acknowledges that "Collard fails to teach of the controller for comparing the state between at least two frames, as determined by the state decision controller, and for automatically prohibiting selecting an inoperable print mode based on the result of the comparison." (Office Action, page 14). Thus, Collard, by itself, cannot render obvious claim 23.

As discussed above in regard to the Section 102 rejections, Ishiguro also fails to disclose or suggest this feature. Instead, Ishiguro determines the size (S1) of a sheet being

copied and compares it with a size (Sx) which had been selected at the start of the copy operation. (col. 18, lines 64-67). Thus, Ishiguro does not compare the states between plurality of frames.

As neither Collard nor Ishiguro disclose, suggest or teach the limitations of claim 23, these reference are unable to render obvious either claim 23, or claim 24 which depends therefrom.

Accordingly, in view of the above, it is requested that the rejection of Claims 23 and 24 under Section 103(a) as being obvious over Collard in view of Ishiguro be reconsidered and withdrawn.

iv. Rejection of Claims 25 and 26 over Collard, Ishiguro and Matsuo

The rejection of Claims 25 and 26 under Section 103(a) as being obvious over Collard in view of Ishiguro further in view of Matsuo et al., U.S. Patent No. 4,912,518 (hereafter "Matsuo") is traversed based on the following.

Claims 25 and 26 depend from claim 23. As discussed above, claim 23 requires:

a selection prohibiting controller for comparing the state between at least two frames, as determined by the state decision controller, and for automatically prohibiting selecting an inoperable print mode of said plurality of print modes through said operation panel based on the result of said comparison.

The present office action acknowledges that Collard does not teach this feature. As discussed above in regard to the Section 102 rejection of claim 4, Ishiguro fails to disclose or suggest this feature. As discussed above in regard to the Section 103 rejection of claims 15 and 16, Matsuo fails to disclose or suggest this feature.

As none of Collard, Ishiguro or Matsuo disclose or suggest the above quoted feature of claim 23, these references, singly or in combination, are unable to render obvious either claim 23, or claims 25 and 26 which depend therefrom.

Accordingly, in view of the above, it is requested that the rejection of Claims 25 and 26 under Section 103(a) as being obvious over Collard in view of Ishiguro further in view of Matsuo be reconsidered and withdrawn.

v. Rejection of Claims 32 and 34 over Shinada and Yoshida

The rejection of Claims 32 and 34 under Section 103(a) as being obvious over Shinada et al., U.S. Patent No. 5,008,709 (hereafter "Shinada") in view of Yoshida et al., U.S. Patent No. 5,930,006 (hereafter "Yoshida") is traversed based on the following.

Claim 32 depends from claim 31. As noted above in regard to the Section 102 rejection of claim 31, Shinada does not disclose or suggest all of the limitations of claim 31 and thus by itself cannot render obvious claim 31. As will be explained below, Yoshida is unable to cure the deficiency of Shinada, and thus these references together are unable to render obvious either claim 31, or claim 32 which depends therefrom.

As noted above in regard to the Section 102 rejection of claim 31, Shinada does not disclose or suggest determining the size of the images from pixel density data, comparing the thus determined image sizes of all of the original documents, and based on a result of that comparison, permitting an editing function on a image when all images are uniform in size and otherwise not permit editing, as required by claim 31. Thus, by itself, Shinada cannot render obvious claim 31.

Yoshida is unable to cure the deficiency of Shinada to render obvious claim 31. Yoshida discloses a system which includes processing for judging the size of characters in an original document which is stored in memory. (Column 15, lines 39-46). Yoshida provides:

Then, the lowest (or the narrowest) of the detected character sizes or the detected heights (or widths) of the individual lines, namely **the size of the smallest number of pixels in the direction of height (width), is adopted as the character size L of the original document (S305)**. As a result, the character size in the original document is judged.

Now, the processing for judging the Nin1 which decides the

question of whether or not the output can be attained by the Nin1 mode which is set based on the set character size L will be described below (the step S105 in FIG. 21).

Yoshida Column 16, lines 4-13 [emphasis added].

Thus, Yoshida discloses a system where the various lines in the document are scanned and the smallest of the detected character sizes is adopted as a basis for controlling the N in 1 reproduction mode. Namely, depending on the size of the smallest font, the number of pages (N) which will be permitted on one output page (i.e., N in 1) is controlled.

In contrast to the present invention, Yoshida does not determine the “size of the image corresponding to image data of each image stored in said memory,” much less make a comparison **between** the state of a first frame of image data and the state of at least one other frame of image data. Instead, Yoshida merely determines the font size of characters on each page and ascertains the smallest font size used.

Yoshida does not determine, “size of an image corresponding to . . . pixel density data of each image stored in . . . memory,” and does not make a comparison between the determined size of the image corresponding to pixel density data for one frame and the determined of the image corresponding to pixel density data of at least one other frame of image data. Thus, Yoshida does not disclose or suggest the above-quoted limitation of claim 31 and cannot cure the deficiency of Shinada to render obvious claim 31.

As Shinada and Yoshida are unable to render obvious 31, these references are also unable to render obvious claim 32, which depends therefrom.

The discussion will now turn to claim 34, which recites:

An image formation apparatus comprising:
a memory for storing pixel density data corresponding to a plurality of images;
means for editing said pixel density data stored in said memory in a manner suitable for providing two images on a single side of a sheet; and

means for controlling, which permits said means for editing to operate when all said pixel density data stored in said memory are uniform in image size and otherwise prohibiting said means for editing from operating.

[Emphasis added.]

Thus, claim 34 requires a means for controlling, which permits the means for editing to operate when all pixel density data stored in said memory are uniform in image size and otherwise prohibits the means for editing from operating.

As noted above with regard to the section 102 rejection of claims 31, 33 and 35 over Shinada, Shinada discloses a copy machine which is capable of recycling documents of various sizes during processing. The machine copies at different magnification in an efficient manner because the original documents are copied in a sequence based on their order. In other words, all of the documents having a first size are copied first at a first magnification, then all documents having a second size are copied second at a second magnification. With each copy cycle, documents not to be copied in that cycle are recirculated.

Thus, Shinada discloses varying the magnification setting based on the original document size and further discloses copying originals in an ordered sequence based on their size. Shinada does not disclose determining the image size from pixel density data that is stored in a memory, comparing the thus determined sizes of all of the original documents and, based on a result of that comparison, permitting an editing function on a image when all images are uniform in size and otherwise not permit editing as required by claim 31.

Yoshida also fails to teach the above discussed limitation of claim 34. That is, in contrast to the requirements of claim 34, Yoshida does not determine whether "all pixel density data stored in said memory are uniform in image size" much less make a comparison **between** the size of a first frame of pixel density data and the size of at least

one other frame of pixel density data. Instead, Yoshida merely determines the font size of characters on each page and ascertains the smallest font size used.

Because Yoshida does not determine, for each frame, the image size of pixel density data stored in memory, and does not make a comparison between the determined size of one frame of pixel density data and the determined size of at least another frame of pixel density data, Yoshida cannot teach the above discussed limitation of claim 34.

Because neither Shinada nor Yoshida disclose, suggest or teach the limitations of claim 34, these references are unable to render obvious claim 34.

Accordingly, in view of the above, it is requested that the rejection of Claims 32 and 34 under Section 103(a) as being obvious over Shinada in view of Yoshida be reconsidered and withdrawn.

In view of the foregoing amendments and remarks, this Application is considered to be in condition for allowance, and reconsideration and a notice of allowance is respectfully requested.

This Amendment does not result in any change to the total number of claims or to the number of independent claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is incurred by this Amendment.

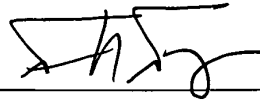
If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee,

and not submitted herewith should be charged to Sidley Austin Brown & Wood's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

By: _____



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December 3, 2001



APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The following is a marked-up version of the changes to the claims which are being made in the attached response to the Office Action dated September 25, 2001.

IN THE CLAIMS:

4. (Five Times Amended) An image processing device operable in a plurality of modes of operation, comprising:

a memory for storing [image] pixel density data of a plurality of frames;

a state decision controller for determining, for each frame, a state of a frame of said [image] pixel density data stored in said memory;

an operation panel for selecting any of said plurality of modes of operation; and

a selection prohibiting controller for comparing the state between at least two frames, as determined by the state decision controller, and for automatically prohibiting selecting an inoperable mode of operation of said plurality of modes of operation through said operation panel based on the result of said comparison.

5. (Twice Amended) An image processing device in accordance with claim 4, wherein said state decision controller determines a length of a frame of said [image] pixel density data in a predetermined direction.

6. (Three Times Amended) An image processing device in accordance with claim 4, wherein said state decision controller determines a frame size of said frame of said [image] pixel density data.

13. (Five Times Amended) An image forming apparatus operable in a plurality of print modes, comprising:

a memory for storing [image] pixel density data of a plurality of frames;

a printer for reading said [image] pixel density data stored in said memory for each

frame and for printing;

a state decision controller for determining, for each frame, a state of a frame of said [image] pixel density data stored in said memory;

an operation panel for selecting any of said plurality of print modes; and

a selection prohibiting controller for comparing the state between at least two frames, as determined by the state decision controller, and for automatically prohibiting selection of an inoperable print mode of said plurality of print modes through said operation panel based on the result of said comparison.

14. (Five Times Amended) An image forming apparatus in accordance with claim 13, further comprising a finisher for stapling sheets printed by said printer, wherein:

said state decision controller determines whether said [image] pixel density data stored in said memory includes [image] pixel density having a frame size different than a frame size of other [image] pixel density data stored in said memory; and

said selection prohibiting controller prohibits selecting a staple print mode through said operation panel when it is determined that said memory includes [image] pixel density data having a frame size different than a frame size of other [image] pixel density data stored in said memory,

said staple print mode being provided so that said finisher provides a staple processing.

15. (Four Times Amended) An image forming apparatus in accordance with claim 13, wherein:

said state decision controller determines whether said memory stores said [image] pixel density data different in frame size from other said [image] pixel density data stored in said memory; and

said selection prohibiting controller prohibits selecting a two-side print mode through said operation panel when it is determined that said memory stores said [image] pixel density different in frame size from other said [image] pixel density data stored in said memory, said two-side print mode being provided for printing said [image] pixel density data stored in said memory on both sides of a sheet.

16. (Five Times Amended) An image forming apparatus in accordance with claim 13, wherein:

said state decision controller determines whether said [image] pixel density data stored in said memory all have a same frame size; and

said selection prohibiting controller prohibits selecting an economy print mode through said operation panel when it is determined that said [image] pixel density data stored in said memory do not all have a same frame size, said economy print mode being provided for printing said [image] pixel density data of a plurality of frames on one same side of a sheet.

23. (Five Times Amended) An image forming apparatus operable in a plurality of print modes, comprising:

a memory for storing a plurality of print jobs, each print job containing [image] pixel density data of at least two frames;

a print-job selector for selecting one of said plurality of print jobs stored in said memory;

a state decision controller for determining, for each frame, a state of a frame of said [image] pixel density data contained in said print job selected by said print-job selector;

a printer for printing said [image] pixel density data contained in said print job selected by said print-job selector;

an operation panel for selecting any of said plurality of print modes; and

a selection prohibiting controller for comparing the state between at least two frames, as determined by the state decision controller, and for automatically prohibiting selecting an inoperable print mode of said plurality of print modes through said operation panel based on the result of said comparison.

24. (Twice Amended) An image forming apparatus in accordance with claim 23, further comprising a finisher for stapling sheets printed by said printer;

wherein said print job selected by said print-job selector contains [image] pixel density data of a plurality of frames and said state decision controller determines whether said print job selected by said print-job selector contains [image] pixel density data having

a frame size different than a frame size of other [image] pixel density data contained in said print job selected by said print-job selector; and

wherein said selection prohibiting controller prohibits selecting a staple print mode through said operation panel when it is determined that said print job selected by said print-job selector contains [image] pixel density data having a frame size different than a frame size of other [image] pixel density data contained in said print job selected by said print-job selector, said staple print mode being provided so that said finisher provides a staple processing.

25. (Three Times Amended) An image forming apparatus in accordance with claim 23, wherein said print job selected by said print-job selector contains [image] pixel density data of a plurality of frames and said state decision controller determines whether said print job selected by said print-job selector includes [image] pixel density data having a frame size different than a frame size of other [image] pixel density data contained in said print job selected by said print-job selector; and

wherein said selection prohibiting controller prohibits selecting a two-side print mode through said operation panel when it is determined that said print job selected by said print-job selector includes [image] pixel density data having a frame size different than a frame size of other [image] pixel density data contained in said print job selected by said print-job selector, said two-side print mode being provided for printing said [image] pixel density data on both sides of a sheet.

26. (Three Times Amended) An image forming apparatus in accordance with claim 23, wherein said print job selected by said print-job selector contains [image] pixel density data of a plurality of frames and said state decision controller determines whether said [image] pixel density data contained in said print job selected by said print-job selector all have a same frame size; and

wherein said selection prohibiting controller prohibits selecting an economy print mode through said operation panel when it is determined that said [image] pixel density data contained in said print job selected by said print-job selector do not all have a same

frame size, said economy print mode being provided for printing said [image] pixel density data of a plurality of frames on same one side of a sheet.

28. (Four Times Amended) An image processing device operable in a plurality of modes of operation, comprising:

a memory for storing [image] pixel density data of a plurality of frames;

a state decision controller for determining, for each frame, a state of a frame of said [image] pixel density data stored in said memory;

a selection prohibiting controller, responsive to said state decision controller, for comparing the state between at least two frames, as determined by the state decision controller, and for determining an inoperable mode of operation of said plurality of modes of operation based on the result of said comparison; and

an operation panel, responsive to said selection prohibiting controller, for selecting any of said plurality of modes of operation, said operation panel automatically prohibiting selecting said thus determined inoperable mode of operation.

29. (Twice Amended) An image processing device in accordance with claim 28, wherein said state of said frame of said [image] pixel density data determined by said state decision controller for each frame thereof is a frame size.

31. (Once Amended) An image formation apparatus comprising:

a sensor for reading an image on an original;

a memory for storing [image] pixel density data read by said sensor;

means for editing [image] pixel density data from [image] said pixel density data stored in said memory;

an image forming portion for using edited [image] pixel density data to print an image;

a feeder capable of feeding originals having different sizes to an image reading position;

means for reading mixed originals for reading a plurality of originals collectively set in said feeder;

means for determining a size of an image corresponding to [image] said pixel density data of each image stored in said memory; and

means for controlling, responsive to said means for determining, which permits said means for editing to edit an image when all images corresponding to said plurality of originals are uniform in size and otherwise prohibiting said means for editing from editing an image.

32. (Twice Amended) An image formation apparatus in accordance with claim 31, wherein said means for editing [image] pixel density data edits an image in a manner suitable for providing two images for printing on a single side of a sheet.

33. (Once Amended) An image formation apparatus comprising:
a sensor for reading an image on an original;
a memory for storing [image] pixel density data read by said sensor;
an image forming portion for using edited [image] pixel density data stored in said memory to print an image;

a stapler for stapling a plurality of sheets each bearing a formed image thereon;
a feeder capable of feeding originals having different sizes to an image reading position;

means for reading mixed originals for reading a plurality of originals collectively set in said feeder;

means for determining a size of an image corresponding to [image] said pixel density data of each image stored in said memory; and

means for controlling, responsive to said means for determining, which permits said stapler to operate when all images corresponding to said plurality of originals are uniform in size and otherwise prohibiting said stapler from operating.

34. (Once Amended) An image formation apparatus comprising:
a memory for storing [image] pixel density data corresponding to a plurality of images;

means for editing [image] said pixel density data stored in said memory in a

manner suitable for providing two images on a single side of a sheet; and
means for controlling, which permits said means for editing to operate when all
[image] said pixel density data stored in said memory are uniform in image size and
otherwise prohibiting said means for editing from operating.

35. (Once Amended) An image formation apparatus comprising:
a memory for storing [image] pixel density data corresponding to a plurality of
images;
a print portion for forming an image on a sheet from [image] said pixel density
data stored in said memory;
a stapler for stapling a plurality of printed sheets; and
a controller which permits said stapler to operate when all of said plurality of
printed sheets have images formed thereon from [image] said pixel density data stored in
said memory which are uniform in size and otherwise prohibiting said stapler from
operating.